

PROJECT DESCRIPTION

I. GENERAL

This project involves the reconstruction of the existing traffic control signal at the intersection of Marriottsville Road and MD 99 (Old Frederick Road) in Howard County, Maryland. Marriottsville Road is considered to run in a north/south direction.

II. INTERSECTION OPERATION

The intersection is to operate in a NEMA eight (8) phase, full-traffic-actuated mode. There will be exclusive/permissive left turn phases for both the north and southbound movements of Marriottsville Road. The Marriottsville Road through movements will operate concurrently. There will be an exclusive/permissive left turn phases for both the east and westbound movements of MD 99 (Old Frederick Road). The MD 99 (Old Frederick Road) through movements will operate concurrently.

An eight phase, full-traffic-actuated, solid state digital controller with intersection monitor and harness, battery back-up, video detection equipment, and (2) four-channel rack mounted time delay output loop detector amplifiers housed in a base mounted cabinet are to be installed at this location.

III. SPECIAL NOTES:

The Contractor shall notify Mr. Robert Snyder of SHA at 410-787-7635 to arrange for the phone drop installation.

The Contractor is to provide Mr. Snyder with the nearest street number, zip code, and telephone number.

CONTACT LIST

The contact persons for District #7 are as follows:

Mr. John Concannon
District Engineer - Traffic
301-624-8140

Ms. Andrea Abend
District Utility Engineer
301-624-8115

Mr. Raymond F. Johnson
Assistant District Engineer - Maintenance
301-624-8105

Mr. Richard L. Daff
Chief, Traffic Operations Division
410-787-7630

Mr. Edward Rodenhizer
Supervisor, Signal Operations
410-787-7652

The Power Company Representative is:
Baltimore Gas and Electric Company
7317 Parkway Drive South
Hanover, Maryland 21076
410-859-9070

WMS • 0001869969

EQUIPMENT LIST

A. S.H.A. furnished equipment material.

None.

B. Equipment to be furnished and installed by the Contractor.

All equipment in this list shall have catalog cuts submitted for approval prior to installation.

Quantity	Units	Description	Quantity	Units	Description
Lump Sum	LS	Mobilization.	4	CY	Test pit excavation.
Lump Sum	LS	Maintenance of traffic.	18	EA	Handhole.
2	EA	27 ft. steel twin mast arm pole with a 70 ft. and 50 ft. mast arms	75	LF	1-conductor electrical cable (3 wire) (No. 4 A.W.G.).
1	EA	27 ft. steel mast arm pole with a 60 ft. mast arm	375	LF	2-conductor electrical tray cable (No. 12 A.W.G.).
1	EA	27 ft. steel mast arm pole with a 38 ft. mast arm.	100	LF	5-conductor electrical cable (No. 14 A.W.G.).
1	EA	Standard S.H.A. traffic signal controller, base mounted cabinet, video detection equipment, and two (2) four-channel loop detector amplifiers. (Note: Controller and cabinet shall be purchased from Econolite and delivered to the S.H.A. signal shop for wiring and testing. Contact Mr. Ed Rodenhizer (410) 787-7650).	1500	LF	7-conductor electrical cable (No. 14 A.W.G.).
1	EA	SHA NEMA 5 traffic signal cabinet for UPS equipment.	125	LF	Bare copper stranded ground wire (No. 6 A.W.G.).
4	EA	12 in., one-way, three section L.E.D. (R,Y,G) adjustable black faced traffic signal head with mast arm mounting hardware and tunnel visors.	75	LF	2 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
4	EA	12 in., one-way, five section L.E.D. (R,Y,YAG,G) adjustable black faced traffic signal head with mast arm mounting hardware and tunnel visors.	1840	LF	3 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
4	EA	12 in./8 in., one-way, five section L.E.D. (12 in. YA, GA/ 8 in. R,Y,G) adjustable black faced traffic signal head with mast arm mounting hardware and tunnel visors.	135	LF	3 in. polyvinyl chloride [Schedule 80] electrical conduit - bored.
4	EA	Terra Video Detection Camera.	75	LF	3 in. polyvinyl chloride [schedule 80] electrical conduit slotted in roadway.
100	LF	Terra Video Detection Camera Cable (No. 18 A.W.G.).	60	LF	4 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
4	EA	16 in. x Var. D-3(1) (Dual Faced) sign with mast arm mounting hardware.	245	LF	4 in. polyvinyl chloride [Schedule 80] electrical conduit - bored.
2	EA	30 in. x 36 in. R 3-5(L) sign with mast arm mounting hardware.	18.5	CY	Concrete foundation for traffic signal equipment.
2	EA	30 in. x 36 in. R 3-5(R) sign with mast arm mounting hardware.	8	EA	Ground rod - 3/4 in. diameter x 10 ft. length.
6	EA	Non-invasive probe (set of 3) with 1000 ft. lead-in cable.	1	EA	Electrical utility service equipment (120/240 V, one phase, three wire system) for an underground electrical power service as per MD-SHA Typical No. 807.05-01 (200 amp. electrical pedestal).
1	EA	20 ft. luminaire arm.	160	LF	24 in. wide HAPPTM - white for stop line.
1	EA	250 W H.P.S. lamp and luminaire.	2	EA	Cut, clean, and cap mast arm pole.
			5	EA	Remove and dispose of existing concrete foundation 12 inches below grade.
			2	EA	Relocate existing ground mounted sign.
			2	EA	Relocate existing pole mounted signs
			15	LF	4 in. x 6 in. wood sign supports.
Lump Sum	LS	Remove and dispose of existing signal equipment.			

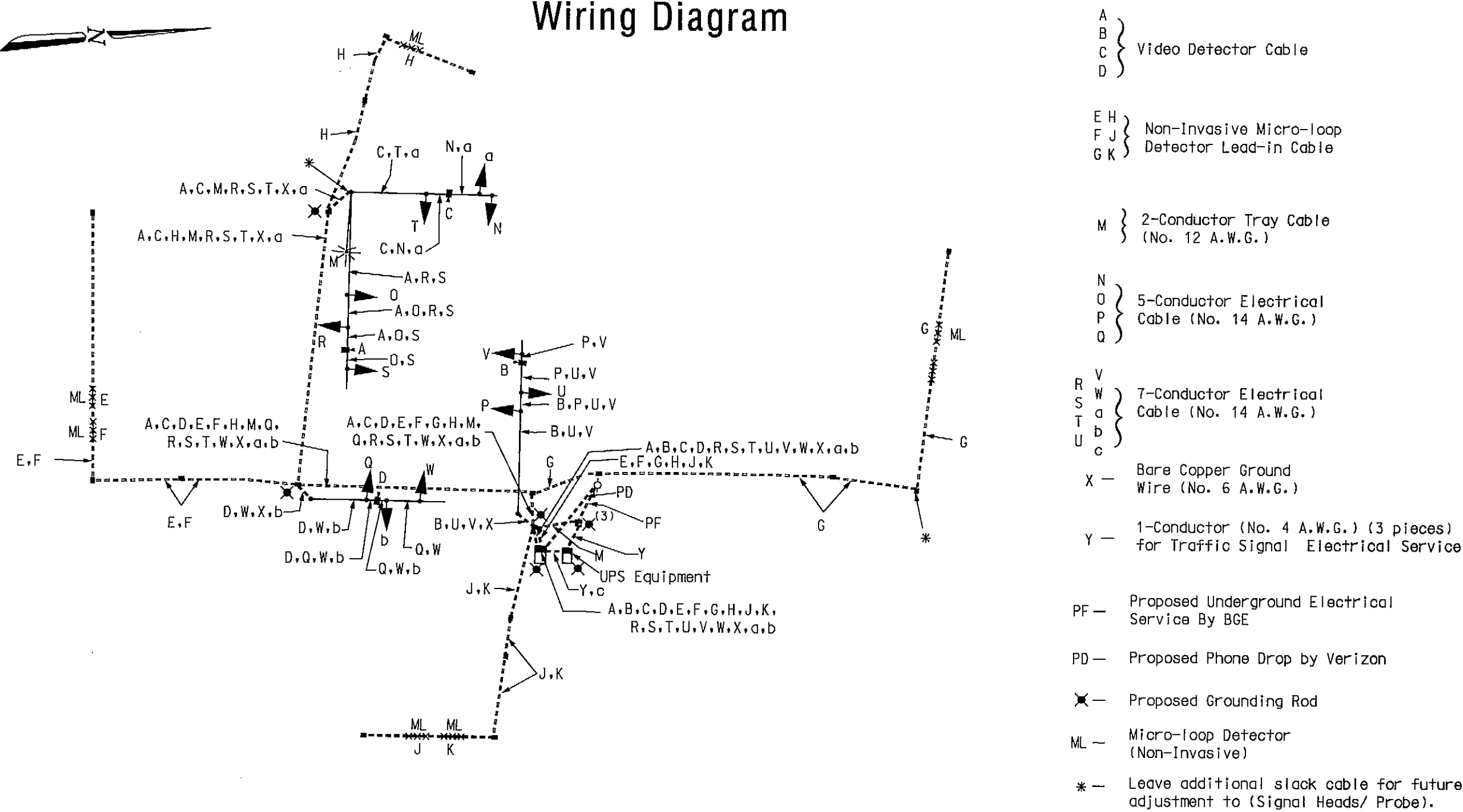
C. SHA forces shall remove the controller and all auxiliary equipment from the controller cabinet. The cabinet and all other materials to be removed by the contractor shall become the property of the contractor.

Quantity	Units	Description
1	EA	base mounted cabinet and controller.

Phase Chart

	1	2	3	4	5	6	7	8	9	10	11	12
Phase 1 & 5	R	R	R	R	R	R	R	R	R	R	R	R
1 & 5 Change to Phase 1 & 6 or Phase 2 & 5 or Phase 2 & 6	G	G	G	G	G	G	G	G	G	G	G	G
Phase 1 & 6	R	R	R	R	R	R	R	R	R	R	R	R
1 Change	G	G	G	G	G	G	G	G	G	G	G	G
Phase 2 & 5	R	R	R	R	R	R	R	R	R	R	R	R
5 Change	R	R	R	R	R	R	R	R	R	R	R	R
Phase 2 & 6	G	G	G	G	G	G	G	G	G	G	G	G
2 & 6 Change	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Phase 3 & 7	R	R	R	R	R	R	R	R	R	R	R	R
3 & 7 Change to Phase 3 & 8 or Phase 4 & 7 or Phase 4 & 8	G	G	G	G	G	G	G	G	G	G	G	G
Phase 3 & 8	R	R	R	R	R	R	R	R	R	R	R	R
3 Change	G	G	G	G	G	G	G	G	G	G	G	G
Phase 4 & 7	R	R	R	R	R	R	R	R	R	R	R	R
7 Change	G	G	G	G	G	G	G	G	G	G	G	G
Phase 4 & 8	R	R	R	R	R	R	R	R	R	R	R	R
4 & 8 Change	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Flashing Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R

Wiring Diagram



NOTE

These plans are approved for construction for a period of one (1) year from the date of approval. Should construction not begin within this time frame these plans shall be null and void without a re-review from the Traffic Engineering design Division.



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STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 99 (Old Frederick Road) at Marriottsville Road

GENERAL INFORMATION PLAN

SCALE N/A DATE Oct. 4, 2009 CONTRACT NO. BW996M82

DESIGNED BY Frank Hoeckel COUNTY Howard

DRAWN BY Frank Hoeckel LOGMILE 1300902.87

CHECKED BY T.I.M.S. NO. 1-770

F.A.P. NO. N/A TOD NO.

TS NO. TS GI- 1891F

SHEET NO. 2 OF 2